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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,522	10/21/2003	Tomohiro Sato	023174-0105	8635

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WASHINGTON, DC 20007

EXAMINER

BOYKIN, TERRESSA M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,522

Applicant(s)

SATO ET AL.

Examiner

Terressa M. Boykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10-21-05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/04;4/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

HC

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United

Claims 1-6 are rejected under 35 U.S.C. 102(a, b, or e) as being anticipated by US 5980777 see abstract, cols 1-5 and table 1 and claims 1. .

US 5980777 discloses a liquid crystalline resin which comprises at least one kind of liquid crystalline polymer selected from liquid crystalline polyester and liquid crystalline polyester amide, both forming an anisotropic molten phase, and an inorganic phosphorus compound, said liquid crystalline resin having an absorbance of 0.5 or less at 380 nm when measured over an optical path length of 10 mm in a 0.5 wt % solution in a 1:1 mixed solvent of pentafluorophenol and chloroform (by weight). It is useful as engineering plastics because of improved color, heat resistance, and hydrolytic resistance.

The liquid crystalline resin and liquid crystalline resin composition obtained as mentioned above undergo ordinary molding such as injection molding, extrusion molding, and compression molding to make electrical and electronic parts, precision parts, and automotive parts. In addition, they give rise to colored products when incorporated with a coloring agent because of their good residence stability and good discoloration resistance. Note that table 1 of the reference discloses

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yellowness indexes having a value of 32 or less as claimed.

TABLE 1

	Liquid crystalline resin (molar ratio of acetic anhydride)	Absorbance	Intrinsic viscosity (pbw)	Color tone		Retention of strength (%) (stability to residence)	Retention of strength (%) (after heat aging)	Retention of strength (%) (hydrolytic resistance)	Evolution of acetic acid, (ppm/g)
				W value	YI value				
Example 1	LCP3 (1.07)	0.1	50	79	25	95	80	85	40
Example 2	LCP4 (1.07)	0.2	50	77	26	94	78	85	42
Example 3	LCP5 (1.07)	0.1	50	80	25	96	82	85	35
Comparative Example 1	LCP1 (1.11)	1.1	50	63	43	85	45	65	400
Comparative Example 2	LCP6 (1.11)	0.9	50	60	25	75	45	60	420
Comparative Example 3	LCP7 (1.11)	0.8	50	72	37	80	48	65	410
Comparative Example 4	LCP8 (1.11)	0.55	50	72	33	90	80	75	55

Any properties or characteristics inherent in the prior art, e.g. L value, although unobserved or detected by the reference, would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". Since the disclosed whiteness, i.e. L value, are expressed differently and thus may be distinct from those claimed, it is incumbent upon applicant(s) to establish that they are in fact different and whether such difference is unobvious. In view of the above, there appears to be no significant difference between the reference(s) and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5980777 in view of US 5727107 see abstract, claims.

The reference discloses a liquid crystalline polyester resin for a reflector plate having the yellowness index as claimed by applicants except for use of the reflector plate in a light emitting diode as disclosed herein. However, US 5727107 discloses a light guide plate, surface light source device, polarized light source device and liquid crystal display. In this connection, examples of liquid crystal polymers of a cholesteric liquid crystal includes: a backbone chain type liquid crystal polymer such as polyester, etc. As a reflection plate, particularly a reflection plate used with a polarized light source device, etc., preferably the half angle of the half value width of spread of the reflection angle of reflected light when parallel light is allowed to be incident is within 10 degrees, especially within 5 degrees from the view of suppressing spread of again outgoing light. Therefore, a substance having a high reflection factor, less spread of the reflection angle, and producing no diffusion reflection can be used as the reflection plate. An appropriate device may be used as the light source; preferably a linear light source such as a (cold or hot) cathode tube,

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a point light source such as light emitting diodes, a linear or surface array thereof, or the like can be used.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ liquid crystal polyester for a reflector plate in the light emitting diode since such is commonly used therein as shown in the reference USP 5727107.

Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov <<http://www.uspto.gov>>), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <<http://www.uspto.gov/ebc/index.html>> or 1-866-217-9197.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (571-272-1700).

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb


Examiner Terressa Boykin
Primary Examiner
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